NOTES ON THE DISAPPEARANCE—TOTALOR PARTIAL— OF CERTAIN SPECIES OF BIRDS IN THE LOWER LACHLAN DISTRICT.

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WHILE collecting for the Australian Museum some years ago, I was asked by the Curator to make a few notes on the migration of birds, their arrival and disappearance, shortly after my notes were mislaid, but recently on their turning up again, I thought perhaps a few remarks on the rarer forms would prove interesting

to Ornithologists.

It is a noticeable fact, and one that must strike an observer, that great changes have taken place in the avifauna of this part of the Colony during the last eighteen or twenty years. Species that were formerly numerous, have for many years past entirely disappeared: others that were numerous, during certain portions of each year are now represented at long and uncertain intervals by a few stragglers. Whilst on the other hand species that were at that time few in numbers have now become plentiful and permanent. Amongst those that have entirely vanished may be mentioned Phaps histrionica, Geophaps scripta, Pedionomus torquatus and Oreoica cristata. Whilst amongst the now occasional visitants (once plentiful) are Falco subniger, Milvus affinis, Coturnix pectoralis, Turnix velox, and Synoicus australis. There can, I think, be little doubt, but that in most cases this disappearance is due to the occupation and stocking of the country with sheep, whilst the prevalence of the domestic cat (gone wild) has doubtless in some cases proved another factor. In former years the whole of these vast plains were covered with a dense mass of vegetation in the shape of dwarf saltbush, herbaceous plants and grass, affording at the same time a safe cover, and a plentiful supply of food in the large quantities of their various seeds. For many years past, this state of things has been entirely changed by stocking with sheep, and as a rule the country is bare, or at best affording but a scanty covering and an equally scanty supply of food. The disappearance of *Pedionomus torquatus*, I think, is due to other causes, for this bird (never very numerous) had disappeared long before the country became bare or thinly clothed with herbage. It is from the shortness of its wings a very poor flier, and always reluctantly takes flight during the day time, instinct teaching it that it would become an easy prey to any predatory feathered foe. Its journeys on the wing, as I am assured by the natives, and which my own observations tend to confirm, are for

this reason only performed at night. The large flocks of sleep constantly roanning over the plains during the day-time, compelled it to take wing and as was always the case, these moving flocks of sheep were attended by numerous raptorial birds, ever on the watch for any quarry that may be flushed, *P. torquatus*, falling an easy victim, whilst the domestic cat wrought havoc amongst those on the the ground, with the much to be regretted result that in this part of the country at any rate, this beautiful and interesting bird is now nearly extinct, and I think the time is not far distant when it will be completely so.

The disappearance of *Oreoica cristata* is however not so easily accounted for, as this bird feeds on insects and its habitats were exclusively the belts and clumps of timber and scrub dotted over the plains, into which stock seldom went. Yet this species has entirely disappeared for many years, whilst in the timbered and scrubby country bordering the plains, some fifty or sixty miles to the northward they are quite numerous, and always have been. If this bird had been only an occasional visitant its disappearance would not be so strange, but it was numerous when the country was occupied and remained so for some eight or nine years after, and in fact would have been regarded as a stationary species; yet they have entirely vanished from the plain country as completely as if they had never existed. Another bird that has also departed for many years past is the Pied robin, Melanodryas bicolor, which formerly and for several years was very numerous here. The disappearance of this bird is also impossible to account for, as the conditions suitable for its existence remain apparently unchanged. A few stragglers of *Phaps histrionica* were here in the year 1880, but none have been seen since, and I have not seen an example of Geophaps scripta for over twenty years.

The disappearance of Falco subniger is probably due to the absence of birds of the quail family, which constituted its chief prey, but in the case of Milvus affinis, one of those mysterious influences seems to prevail, which guides the actions of many Australian animals, for its food (chiefly offal) is as abundant as in bygone years, whilst "grass-hoppers," another of its favourite articles of diet, have on many occasions been here in countless swarms, but unattended by the Kites.

That fine raptorial bird Gypoictinia melanosternon is now becoming rare in this district, where formerly it was tolerably abundant. In former years examples could have been seen on any day, and the nests were to be frequently found. Now months may elapse without a solitary individual being seen; whilst for a radius of fifty miles I do not know of an occupied nest. I am of opinion that their decrease is due to increase of population in this part of the country, not that the birds have been destroyed, for they are exceeding shy and wary, and most difficult to shoot, but

being so shy they naturally retreat from the presence of man, and another cause is the rapid denudation of timber in this part of the country consequent upon increased population. Timber never was plentiful here, being chiefly in the shape of small clumps of a few acres in extent, dotted in long and irregular intervals (often miles between) over the plains. These clumps were the places in which their nests were constructed, and as a rule not more than two or three of the trees in any of the clumps were suitable for the construction of their large nests, the generality of the trees being too small and their branches too weak to sustain the weight. As a natural consequence these larger trees were the first to fall before the selector's axe, as affording the larger quantity of timber or firewood, and the birds had therefore another reason for betaking themselves to more secluded localities, probably the yet untrodden wilds of Western Australia. The favourite resort of this species is evidently open country such as above mentioned, for some fifty or sixty miles to the northward heavily timbered country commences, extending for over one hundred miles with thousands of trees suitable for the construction of their nests, yet it is only a passing straggler that is ever seen there, and I have never known or heard of an instance of their breeding in that locality.

There are on the other hand three species of birds that have become much more numerous since we first occupied this country in the year 1864, and the cause of their increase is by no means obvious, it might be thought that the conservation of water in what was in former years for six to seven months in each year a waterless land, has something to do with it, but at least two out of the three species are quite independent of water. The three species are Gymnorhina tibicen, Myzantha flavigula, and Ephthianura albifrons, the latter has however only appeared here during the last six or seven years, and the increase of water may have something to do with its advent as it drinks daily, but I have never known Gymnorhina tibicen to drink, and Myzanthia flavigula but seldom.